

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/565967
IAP9 Rec'd PCT/PTO 26 JAN 2006
International application No.
PCT/GB2004/003414

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1: ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 23

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 23 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☐ See separate sheet for further details

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-22,24
	No: Claims	
Inventive step (IS)	Yes: Claims	1-22,24
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-22,24
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. **Independent claim 23**

Claim 23 only contains references to the description and/or the drawings.

According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. **State of the art**

Reference is made to the following documents:

D1: WO-A-03030702

D2: US-A-2001042283

2. **Independent claim 1**

Closest prior art: Document D1 showing a cyclonic separator (7) comprising a separating chamber (cf. figs. 3 and 4) an inlet conduit (13) and an outlet conduit (14). The outlet conduit (14) comprises perforated portions equipped with holes (18) which are said to prevent noise and to avoid pressure drops.

Distinguishing features: the outlet conduit (20) is equipped with a plurality of grooves (24) formed in an interior surface of the outlet conduit and extending in the same direction as the longitudinally axis (26) of the outlet conduit.

Technical effect: reduction in the amount of noise generated by the cyclonic apparatus during use; pressure recovery in the cleaned airflow passing through the outlet conduit.

Objective technical problem: an alternative noise suppression and pressure recovery arrangement to that of D1.

Inventive step: D2 only teaches to provide the exterior of an outlet pipe (143) with spiral grooves to enhance centrifugal action (cf. par. 38).

Industrial applicability: The claimed apparatus is susceptible of use in an industrial environment.

Conclusion: Consequently, the subject-matter of independent claim 1 complies with the provisions of Article 33, paragraphs (2)(3)(4) PCT.

3. Dependent claims 2-22,24

Dependent claims 2-22 and 24, when appendant on any of claims 1-22, define various embodiments of the apparatus specified in independent claim 1 and as such also comply with the provisions of Article 33 paragraphs (2)(3)(4) PCT.

Re Item VII

Certain defects in the international application

1. All claims

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

2. Independent claim 1

Independent claim 1 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

3. Description

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

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